MAR 23 1960
LIBRARY
INSTITUTE OF AGRICULTURE

March 27, 1960

Education Summary

A SEMI-MONTHLY REPORT ON NEW DEVELOPMENTS, TRENDS, IDEAS, AND RESEARCH IN EDUCATION

• *Trends and Issues*

The Senate debate on civil rights centers largely on educational issues. The hotly debated measure (which is in the form of an amendment) has seven sections, four relating to schools.

One section prohibits the use of force or the threat of force to interfere with or obstruct court orders in school desegregation cases.

A second section makes it a federal crime for suspects to flee from one state to another to avoid prosecution for bombing schools or churches.

Another section provides grants to be matched by the states or communities under a two-year program to help provide additional nonteaching, professional services required in desegregation cases. (This is the section most violently opposed by the South because in its wording the Senate would go on record as accepting the 1954 Supreme Court desegregation decision.)

The last of the four sections touching on education authorizes the government to provide schools for children of military personnel in areas where regular schools are closed because of desegregation.

Coincidently, a minor bill also related to schools was used by Senate Majority Leader Johnson as a parliamentary vehicle for launching the debate. The bill authorizes the Secretary of Army to lease a portion of Fort Crowder, Mo., to the Stella Reorganized school district.

The public interest is being ignored by the Federal Communications Commission, charges the Council of Chief State School Officers. Edgar Fuller, executive secretary, said, "The FCC has gone completely commercial, and educators . . . intend to do something about it. We believe present FCC policies on educational television are not in the public interest." He referred to a recent FCC ruling that allots the third television channel in an area to a commercial station, reversing a previous FCC policy of reserving the channel for educational use.

The Council also went on record favoring the establishment of national standards for educational television and for the appointment of an outstanding educator as a member of the FCC.

Funds for apprenticeship programs should be withheld by federal and state authorities where the apprenticeship leaders refuse to admit Negroes for training, maintains the National Association for the Advancement of Colored People. In a report prepared for Vice President Nixon, chairman of the President's Committee on Government Contracts, the NAACP charges that discrimination against Negroes extends throughout the country. This discrimination prevents Negroes from enrolling as apprentice carpenters, electricians, printers, machinists and plumbers, the report states. The U. S. Labor Department reports that while the nation needs one million registered apprentices only about one tenth that number are presently enrolled in training.

A broader local tax base to finance education has been urged by Gov. Rockefeller of New York. He asked the State Legislature to give local school districts the power to band together into federated school districts solely to impose nonproperty taxes to help finance their school needs. "The mounting costs of education have outstripped the capacity of real property . . . to provide the funds necessary to meet the localities' share of educational expenses," Rockefeller said. He repeated his suggestion that the 10% federal tax on phone service be transferred to school districts.

Coordination of educational research is the goal of the newly formed Council for Research in Education. Dean Kenneth Anderson of the School of Education, University of Kansas, is chairman of the Council which will "coordinate interdisciplinary interests and capabilities in a scientific approach to educational research." The Council will not do research itself, but may publish reports of research. Participating in the establishment of the Council are the American Educational Research Association, the American Statistical Association and the American Psychological Association. Other associations are expected to join in the near future.

Colleges should hire retired politicians as teachers, suggests former President Truman. "The men and women who have served America as lawmakers and as executives could bring to our universities a new understanding of political theory and practice," he said.

THE AVERAGE SCHOOL SUPERINTENDENT . . .

- is 51 years old
- comes from a rural or small-town background
- very likely was the oldest child in a bigger than average family
- took his first educational job in his 20's
- took his first supervisory position when he was about 28
- first became a superintendent when he was 36
- thinks of his job as an "ulcer mill"
- earns a mediun salary of $10,700
- has both a Bachelor's and Master's degree but not necessarily in education
- sought a superintendency because of higher salaries
- thinks school finance is the most important field of study for a superintendent's job

(Based on a questionnaire sent by the AASA to superintendents throughout the U. S.)

• *Administration*

Double sessions aren't so tragic. Supt. Austin L. Singer of Rahway, N. J., has had more than his share of troubles with double sessions. Not only has he had to struggle with them several times in his career but a New York City newspaper touched off a hassle with townfolk recently when it implied, following an interview, that Singer not only liked double sessions but wanted to keep them in force even when it's unnecessary.

An outspoken man, Superintendent Singer told *Education Summary* that the newspaper had "twisted the facts." He doesn't prefer double sessions. But he does insist that educators need not tremble when they become necessary. When Rahway High School went on double sessions last year, Singer called in administrators and teachers and told them point-blank that double sessions are no excuse for "half effort." The staff members made an extra effort to maintain the school's academic standards and, says Singer, the effect of double sessions has been almost unnoticeable. In fact, many students and teachers say they've come to prefer double sessions because it allows them more time for study and part-time jobs.

CURRENT READING OF SPECIAL INTEREST

Administration and Supervision in the Elementary School, *by Roscoe V. Cramer and Otto E. Domian. Exploration Series in Education, Harper & Bros., 49 E. 33rd St., N. Y. 16. 514pp. $5.50. (Designed to aid school personnel in developing more effective elementary schools, with emphasis on team approach.)*

• *Schools and the Public*

Take a tip from an adman: Honesty is the best policy when it comes to winning votes for a school bond issue.

Says Arthur Kammerman, a Madison Avenue advertising executive, "If there is one secret of success in putting across a bond issue, it is that you must discuss the areas of interest . . . as completely and honestly as possible. Any hint of cover-up or misrepresentation can be fatal." Kammerman, who lives in Westfield, N. J., and has helped pass five school bond issues in ten years, urges schoolmen to gather all the facts about their bond issues and then use every possible source of communication to get those facts across to the voters. Writing in the February *NJEA Review,* Kammerman suggests the facts be broken down into these categories:

- Need: Using photos if possible, show the crowded, obsolete facilities that must be replaced or repaired.
- Program: Show how the money will be spent. Prepare full floor plans, drawings, other details.
- Cost: Break down expenses to the penny. Also make a full explanation of financing procedures.
- Opposition: Figure out what tactics opponents of the new school will take and make sure you have all the answers.

• *Curriculum*

Don't sell small high schools short. Because of limited facilities, small high schools are inherently inefficient, say many experts — including Dr. James B. Conant. Colorado says, not necessarily so.

A state whose wide-open spaces make consolidations impossible, Colorado set out three years ago to see if concentrated, imaginative effort could make small high schools academically as good as big ones. A Ford Foundation grant helped buy audiovisual and other mechanical teaching aids and teachers and administrators were urged to use their wits in expanding curriculum, making new use of space and raising standards.

Today, with more and more small high schools clamoring to get in, the project has been rated a success. Officials believe the project may lead to small high schools turning out a larger proportion of superior students in relation to size than big schools with big resources.

One example of original thinking inspired by the project is the "perimeter" room devised at Aspen High School. One room doubles as a classroom and science laboratory by placing lab workplaces along the walls

THE EDUCATION SUMMARY is published on the 12th and 27th of each month. It is an independent news service and is not affiliated with any association. Circulated privately to educators by subscription only, at $10.00 a year.

Publisher: John G. Escher; *Editor-in-Chief:* Ben P. Brodinsky; *Coordinating Editor:* John Nerber
Editors: Seymour Katz, James Beizer; *Research Assistant:* Nancy G. Bergman

Copyright 1960, Arthur C. Croft Publications, *a division* of VISION Incorporated. Reproduction in whole or in part, without permission of the publisher, is forbidden. *General Offices:* 100 Garfield Ave., New London, Conn. *Canadian Offices:* 1103 Mayor Building, Montreal 2. Entered as second-class matter, May 13, 1953 at the Post Office at New London, Conn., under the act of March 3, 1879. Printed in U.S.A.

and using the center of the room as a classroom. This enables one teacher to conduct a class and still keep an eye on experimenters in case they need help.

CURRENT READING OF SPECIAL INTEREST

The Gifted Student in the New York City Schools: A Memorandum and Bibliography, *Board of Education, N. Y. City, Bureau of Curriculum Research, Curriculum Center, 130 W. 55th St., N. Y. 19. 91pp. Paper. 50c. (A comprehensive inquiry into the status of the gifted student in the N. Y. City schools, including survey results, check lists, program-planning, problem areas.)*

World-wide Summer Placement Director, 1960 Edition. *The Advancement and Placement Institute, Box 99, Station G, Brooklyn 22. 54pp. Paper. $3.00. (A descriptive listing of over 12,000 summer jobs, projects and awards for summer work. New revision particularly prepared for teachers, professors, librarians and college students. Jobs for which high school seniors may apply are clearly indicated. Range covers U. S., territories, many foreign countries.)*

● *Student Points of View*

Is patriotism important? More than two thirds of 687 students answered "No" when asked, in a recent survey by the Gilbert Youth Research Co., whether patriotism was important in their lives.

Of the 687 students, 96% put family ahead of patriotism; 88% put religion ahead of love of country.

Other percentages: Sports are more important than patriotism to 82%; dating outranks patriotism to 88%; and 90% felt that clothing was more important.

Only nine per cent said "Yes" when asked: "If you could do a great benefit to your country by sacrificing the well-being of a loved one, would you do it?" Gilbert reports the following comments in response to this question:

– "Something as artificial as one's nation is never worth that much" (boy, 19, St. Louis).
– "I'm selfish" (girl, 17, Salt Lake City).
– "I would have to live with the loved one, and the country would soon forget me, anyway" (girl, 17, Philadelphia).

● *Teaching Methods*

Try 3-D for better reading. Reading has taken on new meaning at Emerson (N. J.) High School thanks to 3-D – reading in depth. Instead of skipping helter-skelter from one subject to another, students spend half a year reading on specific subjects of their own choosing.

If the student picks submarines, for instance, he'll begin with a work of fiction (*20,000 Leagues Under the Sea*), next a work of nonfiction (*Nautilus 90 North*) and finish with a magazine article. The reading is followed by a comparison of the three presentations as to:

Readability – Considering style and vocabulary, which was easiest to read?

Reliability – Which author seemed to know the most about his subject?

Entertainment – Which book or article provided the most reading pleasure?

Information – Which book provided the most understanding of the topic?

Phyllis D. Weidig and Sue Davis, teachers at Emerson, report in the January *NJEA Review* that 3-D reading not only has increased interest in books but has given students broad new interests and has inspired much nonassigned research.

● *Integration*

. . . AND THE FORBEARANCE

"The great human love that in the end recognizes and rewards merit is everlasting and universal. The outside world does not know, neither can it appreciate, the struggle that is constantly going on in the hearts of both the southern white people and their former slaves to free themselves from racial prejudice; and while both races are thus struggling they should have the sympathy, the support and the forbearance of the rest of the world."

– Booker T. Washington, Founder of Tuskegee Institute, born April 5, 1856. (From his autobiography, *Up From Slavery*, published in 1909.)

● *Philosophy and Goals*

Politics and the classroom go together. Though they can expect a few nips from the public, teachers should encourage students to dabble in practical politics, says Dr. Emlyn Jones, Seattle public schools social studies director and president-elect of the National Council for the Social Studies.

In the February *Washington Education*, Dr. Jones voices approval of teachers who not only urge students to conduct mock elections in the schools but who also encourage them to assist in political campaigns with the party of their choice, to gather opinions on public issues, to collect data on campaign issues and to express their recommendations for improving government on all levels.

They can expect some public criticism for such programs, says Dr. Jones, but teachers who help students understand politics and the machinations of government show awareness of a responsibility "to see that young people acquire a good working knowledge of their community, their state, their nation and the world."

THE TEACHING MACHINE:

a summary of recent developments

Mechanical devices that will teach everything from simple spelling to complex mathematics are being built and tested in laboratories across the country. Both private industry and colleges and schools are probing into the instrumentation of teaching. Articles on teaching machines have appeared in daily newspapers, and in magazines ranging from the *Phi Delta Kappan* to *The New Yorker*. Several books on automatic teaching have already been published; more are on the way.

A milestone was marked last month when, for the first time, the AASA scheduled group sessions on teaching machines at the annual convention. The topics were "Possibilities and Problems of the Teaching Machines" and "The Impact of Electronic Instrumentation on Instruction," and both sessions attracted hundreds of listeners.

"Teaching machines? Revolutionary?" Hardly. Educators have been experimenting with the theory of mechanical instruction since the 1920's. Sidney L. Pressey of Ohio State University built a teaching machine in 1926 and Harvard's B. F. Skinner has been conducting research into their possibilities for more than a quarter of a century.

Professor Skinner, a psychologist and pioneer in teaching machine theory, found in experiments with animals that living creatures learn quicker and more thoroughly when a show of progress is immediately rewarded. In teaching a dog a trick the trainer reinforces and stimulates progress with a scrap of food and an affectionate pat. To win the rewards the dog readily realizes that he must act according to a certain pattern.

Dr. Skinner applied the same principle to human beings. In the case of human beings, the reward is not a bit of food but a measure of pride – the pleasure of accomplishment. To a child, whose whole preoccupation with life is learning, this is a rich reward.

Training Rules

Skinner's rules of training, as defined by George R. Price, are these:

Rule 1. Reinforce desired behavior as promptly as possible.

Rule 2. Reinforce as frequently as possible.

Rule 3. Shape behavior into the desired form through a series of small steps.

Rule 4. Reinforce by rewarding rather than punishing, as far as possible, and avoid harsh punishment.

In nearly every classroom in the world, says Price, these rules are violated:

1. Reinforcement is usually delayed – a student completes a test or an assignment and then must wait days before getting a grade.

2. Reinforcement is infrequent. Only a few of the innumerable small steps in learning are reinforced through grades and teacher approval.

3. Reinforcement (grading) is applied to large blocks of accomplishment – tests, homework, compositions, etc. – instead of to the tiny, gradual, separate steps of learning.

4. Corporal punishment has all but vanished but the main motivation toward proper behavior is still fear – fear of teacher disapproval, fear of a bad report card, fear of flunking, fear of being inferior to peers.

Unless his parents can afford to hire a private tutor, no child can hope to win reinforcement and rewards each time he learns some iota of knowledge. No classroom teacher has the time to give him that much attention. But a machine can.

A true automatic teaching device (not to be confused with devices such as tape recorders that merely

TREE STARTS WITH T – This five-year-old is shown operating a Rheem Califone teaching machine designed to drill prereaders in matching letters with objects. The machine shows a tree and the child selects either T, P or B. If she picks the T, the next object appears. If not, a light flashes and she gets another try.

repeat material over and over) is a machine that proposes a question, accepts an answer from the student, informs him immediately whether the answer is correct and whether he should go ahead.

Properly programed, such a machine follows Skinner's four rules: Right answer is promptly acknowledged; acknowledgment comes with each question; the questions are designed to follow each other in small, gradually progressing steps; punishment – disappointment in answering incorrectly – is negligible.

Types of Machines

Teaching machines fall into two general types: (1) Psychomotor – those that teach manual skills and (2) Conceptual – those that teach mental skills. The former, seemingly ideal for vocational-industrial schools, already have found wide acceptance in the armed forces. Generally, though, schools are more concerned with conceptual teaching devices.

At least two major corporations already have automatic teaching devices ready for production and distribution. The Rheem Califone Corp., which has worked closely with Dr. Skinner, has machines for elementary schools, secondary schools and colleges, and another designed to train key punch machine operators. The Western Design Division of U. S. Industries, Inc., is currently promoting its "Tutor," a machine that can be adapted to teach both mental and manual skills.

But companies who plan to manufacture expensive, electronic marvels are almost bound to run into the barrier of cost. For one thing, few school systems will be able to include the price of a battery of high-priced machines into their budgets and, perhaps more importantly, teaching machines are still basically experimental and there is a risk that the money will be wasted.

General acceptance of teaching machines, therefore, appears to depend not on the complex electronic devices but on inexpensive, mechanical machines – many of which perform remarkable tasks.

Douglas Porter, a Harvard education instructor, has designed a small machine, following Dr. Skinner's principles. It is a shallow wooden box with a narrow window across the top and a crank on the side. Looking in the window, a child reads a question printed on a programed worksheet and writes his answer underneath. A pull of the crank exposes the answer. The child writes a check mark if he's right and cranks up the next question.

More sophisticated machines will not show a question unless the one preceding it was answered correctly. An example of a mechanical machine performing this way is one designed by Dr. James Sakoda of the University of Connecticut. For its programing material this typewriter-sized instrument uses McBee file cards rimmed with punch holes and slots. Manipulating a series of needle-like plungers, the student reads a question on the card and fits the plungers under a line of multiple-choice answers. He pulls a handle and, if the answer was right, the card is released, flips back to a storage well and the next card is exposed in the window. If the answer was wrong, the card is held by the plungers and he must try again.

The student can get help by opening a small window on the left of the machine which will expose a "hint" written on the question card. If he eventually decides he cannot get the answer, a window on the right reveals it to him and he goes ahead. But he cannot cheat. Each glance at the "answer window" is recorded by a pencil attached to the lid making it simple for the teacher to keep a check on ability.

"The machine puts a child on his own," says Dr. Sakoda. "If he's bright, he goes ahead as fast as he can. He doesn't have to wait for the others to catch up. If he's slow, he doesn't have to worry about being left in the dust. If he's shy, he doesn't have to be afraid of answering a question out loud and his confidence slowly gets bolstered. It holds his attention, too. There's little chance he'll get bored."

Electronic machines – with swirling tapes and blinking lights – are much more versatile. There's one that uses tape recordings to congratulate the student for each right answer or to mutter disapproval for each miss. But a machine like Porter's could be made for around $5, and Dr. Sakoda, who is now concentrating on widening its already broad range of programing, believes his machine could be mass-produced for about $50.

Are teaching machines a gimmick or will they some day be as common in classrooms as textbooks and blackboards?

One expert predicts wide-scale acceptance and use within five years. Others claim that mounting teacher shortages and bulging classrooms will make teaching machines a necessity. F. Rand Morton of the University of Michigan said recently that "machine teaching must eventually be recognized as the only valid means of solving our ever-growing problems of mass education."

Selected Bibliography

1. Price, George R., "The Teaching Machine," *Think*, March, 1959, p. 10.
2. The Talk of the Town, "Tireless," *The New Yorker*, Feb. 13, 1960, p. 25.
3. Henderson, Robert, "Listen, Son," *The New Yorker*, Dec. 5, 1959, p. 50.
4. Galanter, Eugene, Editor, *Automatic Teaching: The State of the Art*, New York: John Wiley & Sons, Inc. (1959), 198pp.
5. Lumsdaine, A. A., "Teaching Machines and Self-instructional Materials," *The Education Digest*, Dec., 1959, p. 1.
6. Carpenter, Finley, "How Will Automatic Teaching Affect Education?" *University of Michigan Education Bulletin*, Oct., 1959, p. 8.

● *Guidance*

How high school grads perform in college may have bearing on the teaching methods of Georgia's high school teachers. The State Legislature has approved a bill calling for state colleges to send a progress report on each freshman back to his high school. The report will be made a part of the permanent record of his instructors—enabling administrators to judge each teacher's effectiveness in preparing students for higher education. The move will be noted with interest by many high school principals who have been stumped in finding a means of learning how their graduates fare in college.

The success of a reading program depends to a large extent upon the adult's ability to motivate a love of reading, write Geneva R. Hanna and Mariana K. McAllister in a new book.

An assortment of eye-appealing books usually attracts interest. When the librarian or teacher selects a dozen to 20 books to take to a classroom, he can invariably "sell" them with little effort. He must know the books he talks about and have decided what he will feature about each one. While this takes preparation, it is worth the effort.

In selecting books to feature, the authors suggest the following things to be kept in mind:

- What is the approximate maturity level of the students?
- What kind of books do they generally like?
- What new interests or reading experiences might be of use to them?
- What are some of the special problems of motivation in the class?

Books, Young People and Reading Guidance, by Geneva R. Hanna and Mariana K. McAllister, Harper & Bros., 49 E. 33rd St., N. Y. 16.

CURRENT READING OF SPECIAL INTEREST

Children . . . Their Ways and Wants, *by Katherine Reeves. Educational Publishing Co., 23 Leroy Ave., Darien, Conn. 192pp. $2.95. (This book is concerned with what it takes to build a good classroom in terms of children's emotional and psychological needs. Katherine Reeves is Professor of Childhood Development and Family Relations at Cornell University.)*

● *Higher Education*

Why don't they come back? The University of Minnesota, fifth largest university in the nation, wants to find out why large numbers of eligible students did not return to classes last fall. The University had expected a record enrollment, but, instead, attendance dropped for the first time in eight years — by 30 from the 1958 fall figure.

The University is sending out questionnaires to the more than 2,000 students who were enrolled in the 1959 spring quarter but failed to show up in the fall. The survey is attempting to determine what the students are now doing, why they left the University, and, if enrolled in another school, why they transferred? Also, were low grades, tuition fees, a change in economic or marital status or failure of the University to meet their social or academic needs among reasons for leaving? Results will be reported in May.

CURRENT READING OF SPECIAL INTEREST

Financing Higher Education, 1960-70, *edited by Dexter M. Keezer. McGraw-Hill Book Co., 330 W. 42nd St., N. Y. 36. 304pp. Paper. $2.00. (A large-scale study of the problem of financing higher education by 12 authorities in education, finance and business. Accurate, cautious contribution to any study of crisis in higher education. Authors include: S. E. Harris, R. Ewell, R. D. Calkins, W. L. Thorp, P. H. Coombs, H. F. Clark, others.)*

● *School Plant*

Plan schools with imagination. A leading architect told the AASA conventioneers last month that they're losing their zest for imaginative school building and are settling for the routine, the dull and the commonplace. Walter McQuade, associate editor of *Architectural Forum*, said the majority of new schools, even those whose communities are quite proud of them, are "only a little better than stereotypes of another age." Boring, uninspired, they lack the stimulating and necessary element of delight — an element not only conducive but vital to learning. Architect McQuade's advice: Let architects add the quality of imagination to new schoolhouses.

● *Student Activities*

A Russian language magazine for U. S. students made its debut in January. Dubbed *Student*, the monthly is the first of its kind in this country. It will contain articles on Russian art, science, history, literature and general subjects, and its publisher has made it clear that it will be sterilized of politics. The articles will be graded in reading difficulty over beginning, intermediary and advanced levels of achievement. The only other Russian-language publication for American students is the University of Minnesota's *Sputnik Studenta*, a four-page quarterly newspaper.

For more information about the new magazine write Student, Inc., Box 1627, Washington 13, D. C.

● *Audiovisual*

Another view of the 21-inch screen. In the midst of increasing enthusiasm for television as a teaching tool came a word of dissent last month from Supt. Carl F. Hansen. Dr. Hansen, whose Washington, D. C., school system began experimenting with TV as early as 1951, said years of experience with classroom TV have left him "disenchanted." Except for viewing special newscasts, schools in the capital will turn off their sets next year.

Dr. Hansen's main argument against TV – the lack of interaction between student and teacher. "With televised classes," he said, "there is no feedback. The students just sit there passively and watch. Even when a brilliant teacher conducts the lesson, the response – the real learning that takes place on the other end of the cable – is disappointing."

Reminded that many other large school systems have reported much success with classroom TV, and that more than 500 public school systems and 100 colleges are now making use of electronic instruction, Dr. Hansen remained unimpressed. He expressed concern that American education "is beginning to develop a bandwagon psychology about classroom television. This is a big thing and we in the teaching profession had better make sure where we're going before we go any further."

A skyful of schools. An official of the Midwest Council on Airborne Television (see Audiovisual, Nov. 27) told *Education Summary* that international interest has been created in its plan to launch air-borne TV stations beaming educational programs over wide areas. Educators from throughout this country and Europe will be eagerly watching this fall when electronically outfitted DC-7's take to the skies and begin beaming E-TV to an estimated 13,000 schools in the Middle West. Also watching will be a Scandinavian firm that hopes to use air-borne TV for entertainment.

CURRENT READING OF SPECIAL INTEREST

Language Laboratories and Modern Techniques of Teaching Foreign Languages, *Annual Bulletin #19, 1959-60, Connecticut Audio-Visual Education Association, Yale University Audio-Visual Center, 130 Wall St., New Haven, Conn. 186pp. Illus. $2.00. Quantity discounts.*

● *The Learner*

Stay back to go ahead. Three years ago a pair of Hartford (Conn.) professional school researchers decided to determine if it is better to make a failing child repeat a grade or better to promote him regardless. Their findings: It's better to keep him back.

Miss Katherine H. Daniels and Jules L. Nathanson studied 485 children – all repeaters in some grade from 1 through 6. Assessing their findings, they feel that in 85.6% of the cases the children benefited academically by staying back. Most of the repeaters also showed improved work habits, attitudes, behavior, social adjustment, initiative and leadership, they added.

● *Science Education*

Making physics more palatable to high school students is a task taken on recently by the American Institute of Physics. The Institute plans to send 150 physicists into the nation's high schools in an effort to make it more popular. Only 25% of U. S. high school graduates have ever taken the subject, estimates the Institute, and the drive is aimed at doubling that figure by 1965. First step in the campaign will be to educate school boards to the importance of physics. Among recommendations in the Institute's 136-page handbook, *Physics in Your High School*, by Dr. William C. Kelley, are these:

- Salaries for science teachers should be on a par with those offered by industry. There should be extra pay for extra work.
- College-bound students should study mathematics as a "way of thinking and not a bag of tricks."
- A physics class should consist of about 24 students.
- Pupils not in the regular physics course should be enrolled in special sections with "substantial content" in physics.

● *Adult Education*

Industry gets out the vote. A nonpartisan political education program for its employees was announced last month by Republic Steel Corp. Some 2,500 workers, both men and women in nine cities, have already enrolled for the course. A corporation spokesman said Republic took a survey last summer and was "appalled" by their employees' lack of political knowledge.

● *School Board*

Taking the strain out of campaigns for school board nominees will be the job of a newly formed citizens group in Boston, Mass. Mrs. Dorothy W. Bisbee, who was defeated in last fall's Boston School Committee elections, formed the group on the assumption that many competent men and women balk at running for school boards because of the rigors of election campaigns. Mrs. Bisbee says the group will choose "what they consider qualified candidates," persuade them to run and then electioneer on their behalf.

● *Vocational-Industrial*

The birth of a salesman. Department stores and service establishments are serving as "classrooms" for high schools in Indiana. The businesses are working closely – and willingly – with the schools in a new sales-training program that is mounting in popularity. After a junior year studying sales and management techniques, seniors go to work in the businesses as part-time help. They receive school credit for the on-the-job training and are also paid standard wages.

To get a full range of experience, the students are systematically shifted from one job to another, learning selling, window-dressing, advertising and promotion, etc. Fairchild H. Carter and George Traicoff report in the January *Indiana Teacher* that the carefully supervised work is proving invaluable to students, including those who go on to college.

● *Panorama*

"WE NOW HAVE BEFORE US . . ."

Washington, D. C. The man facing the House Appropriations Subcommittee last month was Dr. Lawrence G. Derthick, U. S. Commissioner of Education. They wanted him to justify his budget request for 1961 and they wanted to know if he could answer his critics.

Last summer, the subcommittee had asked Vice Adm. Hyman G. Rickover what he thought could be done to strengthen the Office of Education through legislation. "It is not further legislation," said the Admiral, "but a change of attitude on the part of the persons in the Office which alone could make it the effective agency it ought to be." Most of all, he suggested, the Office has failed to alert the nation's schools to "the Russian educational menace."

Said Derthick as he took the witness chair, "We in the Office of Education have great respect for Admiral Rickover."

But . . .

Russian Education

His Office "flatly rejects" Rickover's implication that to match Russia's missile feats we must mimic Russian education, said the Commissioner. "Our desire to protect the individual rights, freedoms and opportunities of our people is so different from the aims of the Soviets that we could not possibly imagine patterning our schools after their system."

Importance of Character

Dr. Derthick took sharp issue with Rickover's remark "that one cannot build submarines with character." Said he, "What good is a school with the highest academic standards if it educates geniuses who have no character and who later become criminals, traitors and dictators?"

Ours vs. Theirs

Dr. Derthick went to the heart of the matter in comparisons of American and European schools. How do the products of American education – the doctors, technicians, businessmen, farmers, scientists, etc. – stack up against their European counterparts? Rather well. To wit: Nearly half of the Nobel prizes awarded since 1930 have gone to native-born Americans.

U. S. School Administrators

After outlining the training and duties of U. S. school administrators, Dr. Derthick asked the congressmen to consider their own acquaintances among superintendents. "You know that, in general, they are strong and resourceful leaders devoted to their responsibilities and meriting the respect of teachers and citizens alike."

The calm, detailed 10,000-word defense of the Office of Education and American schooling ended with these words: "These schools of ours are the schools of democracy and they can be no stronger than the people want them to be."

Rep. Melvin Laird (R.–Wisc.) thanked the Commissioner for "placing this controversy in the proper perspective."

New Classroom Material

A FREE MAP OF . . . "Forest Regions of the United States" may be had by writing the U. S. Department of Agriculture. In color, the map measures 18" by 20" and is yours for the asking by simply requesting "Publication M-5154" from: Division of Publications, Office of Information, U. S. Department of Agriculture, Washington 25, D. C.

THREE NEW LITERARY CLASSICS . . . for English classes have been released by New American Library in inexpensive, paperback editions: "A Tale of Two Cities," "Gulliver's Travels," "Jane Eyre." Attractive reading copies, excellent for high school use. Signet Classics from: New American Library, 501 Madison Ave., N. Y. 22. 50c each.

INVALUABLE A-V GUIDE . . . is the Audio-Visual Center's new 1960 catalog of "Educational Motion Pictures." Each 16mm. film listed carries a capsule description, producer, rental price as well as grade-level index. 5,784 titles. From: Audio-Visual Center, Indiana University, Bloomington, Ind. 664pp. Paper. Apply.

YOUNGSTERS, SIX TO NINE . . . will enjoy "Hymie's Fiddle," by Mel Silverman, the story of little Hymie and how his love for playing a violin got him into a number of adventures. Locale is New York's lower East Side. From: World Publishing Co., 2231 W. 110th St., Cleveland 2, Ohio. 48pp. Illus. $2.50.

TEACHING KIDS HOW TO USE THE LIBRARY . . . is a task made easier by the use of "Library Skills," a paperback prepared by the School Library Association of California (Northern Section). Teaches library use through games and devices, explains Dewey Decimal System, card catalogs, orientation, other aspects of using library. Many library games. From: Fearon Publishers, 2263 Union St., San Francisco 23, Calif. 74pp. Apply.

A NEW SCIENCE FILM . . . for primary, middle grades is "Electricity: How to Make a Circuit," (Using the Dry Cell). Explains how dry cell battery works, nature of a circuit, how switches break or complete circuits, etc. 16mm. film, 11 minutes in length, available in color or black and white. From: Encyclopaedia Britannica Films, 1150 Wilmette Ave., Wilmette, Ill. Apply.

WOODWORKING CLASSES WILL FIND USEFUL . . . "Basic Woodwork Projects," by Harry McGinnis and M. J. Ruley. Suitable for junior high, first woodworking course in senior high. Working drawings are shown with alternate designs. Encourages individual to work out own designs. From: McKnight & McKnight Publishing Co., Bloomington, Ill. 149pp. Illus. $3.20.

ALL YOUNGSTERS WILL ENJOY . . . reading "The Horse Tamer," by Walter Farley (author of "Black Stallion"). Story of horse-taming exploits by trainer of Black Stallion. From: Random House, 457 Madison Ave., N. Y. 22. 175pp. Illus. $2.00.

BIOLOGY STUDENTS DISSECTING FROGS . . . will find a new 17-minute, 16mm. film, "Frog Anatomy," helpful. Covers complete process of dissecting frogs, examination of organs. Available from Audio-Visual Center, Indiana University, Bloomington, Ind. Color: $150; b/w: $75. Preview, rental prints also available.